

PERSONNEL QUALIFICATIONS AND TRAINING

SUPERVISING CRIMINALIST & QUALITY ASSURANCE MANAGER

Refer to DOC ID [837](#) and [844](#) for responsibilities, duties, and required qualifications.

DNA TECHNICAL LEADER

This is a Senior Criminalist level position requiring a strong biological science background. It is the responsibility of the DNA Technical Leader to direct all phases of the laboratory protocols associated with DNA technology.

Responsibilities and Duties:

- Resolves technical problems
- Manages the technical operations of the DNA laboratory
- Evaluates DNA methodology and proposes new or modified techniques
- Evaluates and approves validations and implementation of new techniques
- Oversees implementation of new or modified DNA techniques to ensure that all of the validation requirements have been met
- Reviews and approves DNA training, DNA quality assurance, and DNA proficiency testing programs
- Provides expert testimony
- Oversees training, quality assurance, and proficiency testing in the DNA section
- Confers with appropriate law enforcement personnel as to laboratory findings, value of certain tests versus others, nomenclature in the field, and timing and availability of test results
- Advises superiors on subjects such as validity of specific techniques or variations among different manufactured laboratory products and reagents
- Works with the Quality Assurance Manager to ensure compliance with quality assurance requirements
- Documents approval of newly qualified analysts to begin casework analysis after review of academic transcripts and training records
- Approves technical specifications for outsourcing agreements
- Reviews internal and external DNA Audit documents, approves corrective actions, and documents reviews
- Reviews DNA procedures annually and documents such review
- Approves annual DNA quality system assessment review

Minimum Qualifications:

Education - The Technical Leader must meet certain degree and course requirements unless a waiver of educational requirements is granted by ASCLD/LAB. A minimum of a Master's degree in a biological, chemical, or forensic science and 12 semester or equivalent credit hours which include at

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least one graduate level class registering three or more semester or equivalent credit hours covering biochemistry, genetics, molecular biology, and statistics or population genetics as it applies to forensic DNA analysis is required for the Technical Leader.

Training - It is required that the individual have a thorough knowledge of the theory and practice of DNA analysis and forensic methodology.

Experience - The Technical Leader must have a minimum of 3 years of human DNA analysis experience as a qualified DNA analyst working with forensic samples. The Technical Leader shall have previously completed or successfully completed the FBI sponsored auditor training within one year of appointment.

Knowledge, Skills, and Abilities:

- Knowledge of non-routine DNA testing procedures
- Knowledge of modern DNA laboratory equipment, including instrumentation and controls
- Knowledge of statistical methods applied in the DNA forensic community
- Extensive knowledge of principles, methods, and techniques applicable to DNA technology
- Extensive knowledge of basic scientific principles and practices used in biochemistry, genetics, and forensic serology
- Thorough knowledge of quality control procedures and current literature in this scientific area
- Ability to plan and coordinate work so as to meet heavy and fluctuating workload conditions
- Ability to deal effectively with law enforcement and criminal justice personnel as well as fellow scientists
- Ability to apply scientific and technical knowledge with accuracy in directing subordinates in a variety of tests and procedures
- Ability to plan and direct comprehensive evaluation studies and make sound recommendations on the basis of laboratory findings
- Possess independent problem solving skills

STATE CODIS ADMINISTRATOR

This is a Senior Criminalist position requiring a strong biological science and computer background. This person must meet the Federal Standards requirements for CODIS Administrator and may also meet the minimum guidelines under DNA Criminalist. The State CODIS Administrator is responsible for the operation of the Combined DNA Index System (CODIS) for both casework and database.

Responsibilities and Duties:

Refer to the CODIS Operating Policies and Procedures

Minimum Qualifications:

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Education - A minimum of a bachelor's or an advanced degree in biology, chemistry, or forensic science related area and shall have successfully completed a minimum of nine semester hours or equivalent covering course work in biochemistry, genetics, molecular biology, and statistics or population genetics as it applies to forensic DNA analysis.

Experience - Shall have a working knowledge of computers, computer networks, and computer database management with an understanding of DNA profile interpretation. The CODIS Administrator shall have documented mixture interpretation training. The CODIS Administrator shall have previously completed or successfully complete the FBI sponsored CODIS training within 6 months of appointment and the FBI sponsored auditor training within one year of appointment.

Knowledge, Skills, and Abilities:

- Working knowledge of computers, computer networks, and computer database management
- Ability to interpret DNA profiles

ALTERNATE CODIS ADMINISTRATOR

The Alternate CODIS Administrator(s) must also meet the minimum guidelines under DNA Criminalist. In addition to being a DNA Criminalist responsible for casework, the Alternate CODIS Administrator(s) will when necessary, disposition matches and perform other CODIS duties as needed should the CODIS Administrator be unavailable.

DNA CRIMINALIST (I and II)

This is a responsible professional level position requiring a strong biological science background. The DNA Criminalist performs scientific analysis on biological material.

Responsibilities and Duties:

- Reagent handling and preparation
- Participates in validating and implementing new techniques
- Establishes liaisons with colleagues in the field
- Analysis, interpretation, and reporting of assigned DNA casework
- Technical review of casework
- Provides expert testimony
- Interacts with investigative personnel
- Educates law enforcement agencies as well as general public on uses of DNA typing

Minimum Qualifications:

Education - A minimum of a Bachelor's or an advanced degree in biology, chemistry, or forensic science related area and shall have successfully completed a minimum of nine semester hours or

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equivalent covering course work in biochemistry, genetics, molecular biology, and statistics or population genetics as it applies to forensic DNA analysis.

Experience - A minimum of six months of forensic DNA laboratory experience is required. It is highly desirable that the DNA Criminalist have a minimum of two years forensic laboratory experience. Higher education can replace some of the requirements.

Training - The minimum requirements a Criminalist must meet before being qualified to perform casework are based on the experience, training, and job knowledge of the individual. This will be demonstrated by the successful completion of training, the passing of specified tests, and demonstration of a thorough knowledge of the theory and practice of DNA analysis and forensic methodology.

In-house qualification standards for DNA Criminalist - The Criminalist will complete requirements for in-house qualification, which include the following:

- a. Knowledge of the scientific principles, techniques, and literature of DNA typing as demonstrated by course work and/or written or oral examination
- b. Practical laboratory skills in the performance of DNA analysis as demonstrated by observation and successful analytical results
- c. The ability to correctly interpret the DNA analysis results is of paramount importance. All examiners will go through a well documented set of proficiency test samples and/or known samples while in training
- d. An individual's overall competency will be evaluated through the successful completion of all assessments throughout the entire DNA training program.

Knowledge, Skills, and Abilities:

- Extensive knowledge of principles, methods, and techniques applicable to DNA technology
- Extensive knowledge of basic scientific principles and practices used in biochemistry and genetics
- Thorough knowledge of modern laboratory equipment relating to this scientific discipline, including instrumentation and controls
- Thorough knowledge of quality control procedures and current literature in this scientific area
- Ability to plan and coordinate work to meet fluctuating conditions
- Ability to deal effectively with law enforcement and criminal justice personnel as well as fellow scientists
- Ability to maintain laboratory and administrative records and reports in accordance with departmental requirements

DNA INTERN & INVESTIGATIVE ASSISTANT

DNA interns and Investigative Assistants will learn the basic support operations of a forensic biology lab. They will be expected to perform various laboratory support duties determined by the DNA

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Technical Leader and DNA Supervisor. For example, a DNA intern may learn how to make various reagents, perform quality control testing of reagents and kits, and complete performance checks of instrumentation in the Biology Unit. A DNA Investigative Assistant may learn how to process offender samples (convicted and arrested), keep the laboratory clean and well stocked, and check the performance of various equipment as required, i.e. monthly, quarterly, or semi-annually. DNA interns and Investigative Assistants may also have the opportunity for casework observation, participation in biology related research projects relevant to the forensic science community, and participation in validations for the Primary Examination and DNA Sections of the Forensic Science Division (FSD).

DNA OFFICE SUPPORT SPECIALIST

The primary role of the Office Support Specialist is the management of offender samples (convicted and arrested) within the FSD. This includes managing the receipt and short term organization of all offender samples upon arrival at the FSD, managing probable cause determination and pickup of qualifying arrestee samples collected in the Washoe County Jail, qualifying offender samples for inclusion or rejection, assigning a STaCS barcode number to each sample, preparing all samples for outsourcing, managing the long term storage of offender samples, performing NCIC checks on offenders as part of the match confirmation process, and other duties as assigned.

CODIS INTERN AND TECHNICIAN

Refer to the CODIS OPERATING POLICY AND PROCEDURE MANUAL.

LEVELS OF AUTHORITY

Individuals with delegated responsibilities have been empowered by the Division Director with the authority to carry out these responsibilities and act in his/her place. For example, DNA Criminalists or the DNA Technical Leader can reject any chemical, reagent, supply, or material, which fails to meet specifications. The DNA Technical Leader can also terminate any testing if a technical problem is identified; appropriate notifications must be made and the specific problem documented.

The Quality Assurance Manager in conjunction with the DNA Technical Leader will have the responsibility for maintaining the Quality Assurance program. The Quality Assurance Standards for Forensic DNA Testing Laboratories and Convicted Offender DNA Databasing Laboratories, issued by the director of the Federal Bureau of Investigation, will provide the framework for the WCSO DNA Section Quality Assurance program. Any supplements and revisions to the Federal Standards will be reviewed for possible incorporation into the laboratory's DNA Quality Assurance program.

Any member of the Biology Unit can suggest revisions to the DNA Quality Assurance program. Changes to the DNA Quality Assurance Manual will be made as necessary; at a minimum, the DNA Quality Assurance Manual will be reviewed at least annually. The revised DNA Quality Assurance

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Manual will be approved by the DNA Technical Leader, Biology Unit Supervising Criminalist, and the Quality Assurance Manager. Any affected individual will be notified of changes to this Manual and provided any necessary training. The active version of the DNA Quality Assurance Manual will be saved in Qualtrax; in addition, all previous versions will be stored in Qualtrax. Any draft or printed documents are not deemed the active official document.

Direct responsibility for overseeing the DNA Quality Assurance program will reside with the DNA Technical Leader. The DNA Technical Leader may suspend any DNA testing process if it fails to meet specified standards. The DNA Technical Leader is responsible for the oversight of all quality control documents (instrument logs, reagent records, etc.).

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